

What is claimed is:

1. A method for forming a contact structure for a semiconductor device, said
5 semiconductor device having a contact window defined in an oxide layer, and
a plug filled in said contact window, said method comprising steps of:
removing some of said oxide layer to make the plug protrude;
oxidizing the exposed region of the protruding portion of the plug to
form an oxidized portion; and
10 removing the oxidized portion of the plug.
2. The method as recited in claim 1, further comprising a step of forming a
first dielectric layer on the plug being undergone said step of removing the
oxidized portion, and on the oxide layer being undergone said step of
removing some of said oxide layer, wherein the upper surface of the plug
15 being undergone said step of removing the oxidized portion is exposed.
3. The method as recited in claim 2, further comprising a step of performing
planarization after the first dielectric layer is formed.
4. A method for forming a conducting wire and conducting wire contact
structure for a semiconductor device, said semiconductor device having a
20 contact window defined in an oxide layer, and a plug filled in said contact
window, said method comprising steps of:
removing some of said oxide layer so that the plug protrudes;
oxidizing the exposed region of the protruding portion of the plug to form
an oxidized portion;

removing the oxidized portion of the plug;

forming a first dielectric layer on the upper surface of the entire structure generated from the above steps, wherein the upper surface of the plug is exposed;

- 5 forming a second dielectric layer on the upper surface of said first dielectric layer including the upper surface of the plug; and

 forming a conducting wire in said second dielectric layer.

5. The method as recited in claim 4, wherein said step of forming the
conducting wire includes coating photoresist on said second dielectric layer,
10 forming a trench of a predetermined patterns in said second dielectric layer by
exposing, developing and etching; and filling metal in the trench to form a
conducting wire.

6. The method as recited in claim 4, further comprising a step of performing planarization after said forming step for the first dielectric layer.

- 15 7. The method as recited in claim 4, wherein said first dielectric layer and said second dielectric layer are of different materials.

8. The method as recited in claim 4, wherein said first dielectric layer and said second dielectric layer are of the same material.